

## **Traditional soil fertility management strategies: Do they conform to recommendations in organic farming? A case study of the smallholder farmers of the Central Rift Valley Province of Kenya**

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[http://www.regional.org.au/au/asa/2008/poster/farmer-focussed-research/5583\\_onwongarn.htm](http://www.regional.org.au/au/asa/2008/poster/farmer-focussed-research/5583_onwongarn.htm)  
<http://erepository.uonbi.ac.ke:8080/xmlui/handle/123456789/34265>

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### **Abstract:**

The low input nature of organic farming (OF) is often likened to the traditional soil fertility management practices (TSFMP) of smallholder farming systems in developing countries. There are however no concrete studies to support this assertion. The present study aims at comparing the TSFM practices with recommendations in OF specifically recycling of organic wastes of crop and animal origin and maintenance of long-term fertility of the soil. These were monitored through resource flow mapping and calculation of nitrogen balances, at crop production level, using NUTMON toolbox. The study was conducted in Gilgil, Lare and Molo divisions of the Rift Valley Province of Kenya. Crop residues and manure were the principal organic resources recycled within the smallholder farming systems. The calculated N balances were negative; -70.9, -80.2 and -99.8 kg/ha/year for Gilgil, Lare and Molo, respectively. The organic resources recycled within the farm were therefore insufficient to sustain soil fertility. This is contrary to recommendations in OF, in which the long-term soil fertility should be maintained and/or enhanced. There were however opportunities; composting, biomass transfer and improved use of external and internal farm boundaries, enhanced livestock manure handling and integration of agroforestry trees, for improving the TSFMP to expectations of